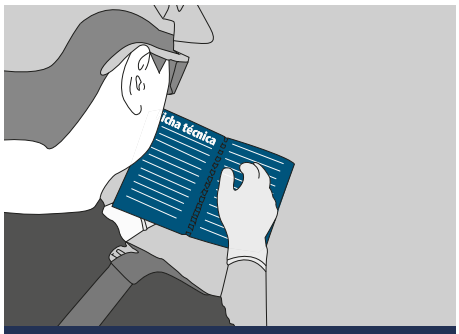
Consumer information
Technical guide

butech Electric radiant floors
butech building system

PORCELANOSA Grupo

butech®

butech Electric radiant floors · Placement guide



1. General recommendations.

Installing electric radiant floor heating requires qualified personnel with experience in this type of systems. The connection of the mesh to the electricity grid, and completion of the system warranty sheet, can only be performed by a certified electrician.

Check the information in data sheets or packaging before using any product. Follow the manufacturer's recommendations. Using the appropriate tools and materials for each type of work is essential. Comply with occupational safety regulations.

2. Floor design.

Depending on the floor design and surface, lay out the distribution of the electrical mesh. Only place in floor transit areas where no drilling is expected. Leave at least 10 cm of separation between the wall and the mesh.

Choose the position for the thermostat and assess the need to place a thermal insulation layer.

3. Installing the radiant floor heating.

Check that the base or placement substrate is stable, non-deformable, and with no risk of movements associated to the cement mortar curing.

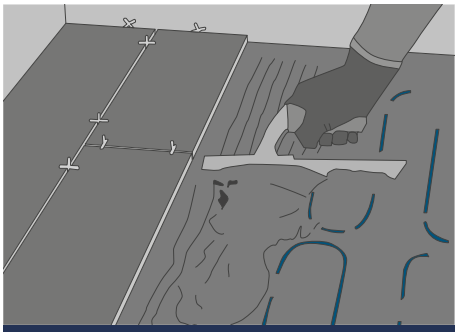
Prepare both the floor and wall covering substrate for the necessary installations, and arrange on the floor substrate the chosen electric radiant floor heating.

Choose the position for the thermostat and assess the need to place a thermal insulation layer.

5. Bonding material.

Use improved deformable cement-based adhesives C2 S1, **maxifluid**. The use of cement-based adhesives with good workability and high wettability is recommended.

Follow manufacturer recommendations in the preparation and use of adhesives. Do not apply adhesive with a final thickness greater than that indicated on the bag.



6. Placement technique.

Place the floor with the thin-bed method with adhesive and notched trowel. Verify that there is full contact between the adhesive and the piece base. It is recommended to carry out double gluing of the tiles or to use a cement-based, fluid type adhesive.

Control the adhesive wettability, pressing the ceramic on the bonding material, and check that the latter makes correct contact with the tile back.

7. Joint material.

Use deformable, CG2 cement-based joint materials, **colorstuk rapid** type, with fine particle size. It is essential that the joint has a good water resistance and final color stability. Apply the joint material with a rubber trowel, avoiding the formation of bubbles, cracks, or gaps. Do not let the joint material harden on the ceramic and do not soak the joint with excess water.

There will be perimeter joints in corners, floor level changes, and changes of material; minimum width: 8 mm. We recommend the **s-107 n** putty.

Recommended materials.

Preparing the substrate.

level 1 n

Fast hardening self-leveling mortar for leveling and regularizing interior flooring placement substrates.

Characteristics:
Excellent adherence. Flexible.
Application thickness between 2 and 10 mm.
Easy application with a straight edge trowel or scraper.

Recommended use:
Substrate regularization in refurbishing jobs.
Indoor large format floor tile coverings.
Floor tiles with radiant heating.

Bonding material.

maxifluid

Type C2 E S1 high-performance cement-based adhesive, for laying any flooring model from the PORCELANOSA, VENIS, and URBATEK catalogs. Specially recommended for large format tiles.

Characteristics:
Fluid adhesive; covers fully the underside of tiles without having to resort to the floating and buttering method.
Excellent adherence, greater than 10 kg/cm².
Laying thickness up to 10 mm.

Certifications/Standards:
Avis technique: CSTB 1060-222 MC 298
EN 12004 C2 E S1

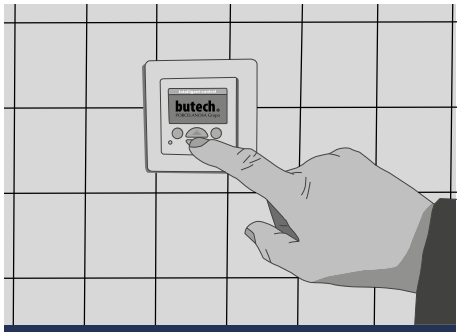
For more information about a butech product, consult the technical data sheet. Available at www.butech.es

4. Preparing the substrate.

Once the installation is checked, cover the radiant floor with a layer of mortar that serves as a support for the ceramic floor.

The placement surface must meet the suitable characteristics for placing ceramic: clean surface, dry, rough texture, non-crumbling, and flat.

In bathroom refurbishments, it is recommended to use self-leveling mortars **level 1 n** type.



8. Start-up.

Program the thermostat according to the user manual supplied with the electrical mesh.

For the start-up of the radiant floor heating select the function **First operation of the heating system** and follow its instructions.

Once 20 days have passed and the desired temperature has been reached, selected the final operating mode.

Electric radiant floor heating.

The **electric radiant floor heating** from **butech** is a heating system with an electric element for radiant floors, specially designed to provide comfort in ceramic floors in bathrooms and, in general, all kinds of floors walked barefoot. This system includes an electric element and a digital thermostat timer.

The electric element is a heating wire with 150 W/m² that transforms electric energy into heating. The wire contains 2 electric resistances (feed and return), so that they complete an electrical circuit. Never cut this kind of wire.

User-friendly digital thermostat that regulates the turn on and off and heating power of the system. It regulates up to 20 m² of electrical mesh.

This system is characterized by:

Maximum comfort with minimum power consumption.

Easy, quick and economic installation. No maintenance costs.

It only increases the height of the floor by 8 mm. Ideal in bathroom refurbishments

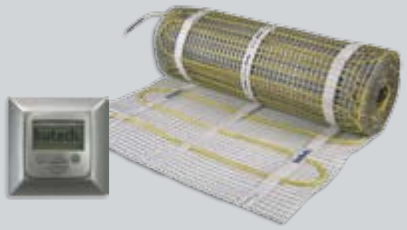
Avoids the installation of radiators on the walls.

Applicable in floors where a water pipe heating cannot be installed.

Guarantee: There is a warranty period of 10 years for the electrical mesh and 2 years for the thermostat and the sensor.

Technical data:

Voltage:	230 V – 50/60 Hz
Power:	150 W/m²
Max. charge:	16 Amp / 230 V max
Temperature:	+5 / +40 °C
Approvals:	FI /CE/CCA



Digital programming thermostat and Electrical mesh.

Detail of the placement process of the electrical mesh.

Joint material.

colorstuk rapid

Line of type CG 2 technical mortars for sealing joints, suitable for all ceramic tile types. They are easy to apply, resistant, and have a color stable joint. Fine grained joint material, suitable for sealing joints from 1 to 15 mm.

Characteristics

Excellent adherence and deformability without the need for additives.
Good resistance to abrasion.
Waterproof and anti-fungal.
Wide color range.

Certifications/Standards:

EN 13888	CG2

Complements.

concept panels

The use of this type of extruded polystyrene panels for thermally insulating the floor is recommended. They are light, resistant to compression, and have low thermal conductivity.

Choose the panel with the appropriate thickness, depending on the required thermal insulation.

s-107 n

Neutral silicone putty for sealing joints. Specially recommended for sealing perimeter and movement joints. Indoor and outdoor use.

Recommended use:

Sealing joints even between materials sensible to chemical attack.
Sealing movement joints in floors and walls.

Materials table **butech**®

KEA	SAP	Product description	Packaging	Performance* 44 x 44 cm	44 x 66 cm
100103352	100103352	panel concept xps 6 mm 1.250 x 600	1 slab	0.75 m²/ slab	0.75 m²/ slab
100103352	100103352	panel concept xps 10 mm 2.500 x 600	1 slab	1.50 m²/ slab	1.50 m²/ slab
B62902132	100073469	suelo radiante eléctrico 1 m (150w) n	Roll 1 m² + thermostat	1.20 m²/mesh	1.20 m²/mesh
B62902136	100073471	suelo radiante eléctrico 2 m (150w) n	Roll 2 m² + thermostat	2.30 m²/mesh	2.30 m²/mesh
B62902134	100073473	suelo radiante eléctrico 3 m (150w) n	Roll 3 m² + thermostat	3.35 m²/mesh	3.35 m²/mesh
B62902142	100073475	suelo radiante eléctrico 4 m (150w) n	Roll 4 m² + thermostat	4.40 m²/mesh	4.40 m²/mesh
B62902144	100073477	suelo radiante eléctrico 5 m (150w) n	Roll 5 m² + thermostat	5.45 m²/mesh	5.45 m²/mesh
B62902138	100073479	suelo radiante eléctrico 6 m (150w) n	Roll 6 m² + thermostat	6.50 m²/mesh	6.50 m²/mesh
B62902133	100073481	suelo radiante eléctrico 7 m (150w) n	Roll 7 m² + thermostat	7.55 m²/mesh	7.55 m²/mesh
B62902149	100073493	suelo radiante eléctrico 8 m (150w) n	Roll 8 m² + thermostat	8.60 m²/mesh	8.60 m²/mesh
B62902135	100073467	suelo radiante eléctrico 10 m (150w) n	Roll 10 m²	10.65 m²/mesh	10.65 m²/mesh
B62902164	100086628	S.R.E. termostato digital n			
Consult in butech's professional **butech** all the available meshes and complements.					
B15901002	100048841	level 1 n	23 kg bag	8 kg/m²	8 kg/m²
B11906008	100033113	maxifluid gris	25 kg bag	5 kg/m²	6 kg/m²
B22501001	100004294	colorstuk rapid blanco n	5 kg bag	210 g/m²	180 g/m²
B22502013	100004305	colorstuk rapid gris n	5 kg bag	210 g/m²	180 g/m²
B22503002	100004295	colorstuk rapid manhattan n	5 kg bag	210 g/m²	180 g/m²
B22503004	100004297	colorstuk rapid cemento n	5 kg bag	210 g/m²	180 g/m²
B22503005	100004298	colorstuk rapid antracita n	5 kg bag	210 g/m²	180 g/m²
B22503006	100004299	colorstuk rapid negro n	5 kg bag	210 g/m²	180 g/m²
B22503007	100004300	colorstuk rapid caramelo n	5 kg bag	210 g/m²	180 g/m²
B22503009	100004302	colorstuk rapid marfil n	5 kg bag	210 g/m²	180 g/m²
B22502010	100004303	colorstuk rapid marrón n	5 kg bag	210 g/m²	180 g/m²
B22502011	100004304	colorstuk rapid tabaco n	5 kg bag	210 g/m²	180 g/m²
B21522220	100060549	colorstuk rapid moka n	5 kg bag	210 g/m²	180 g/m²
B22502016	100004308	colorstuk rapid beige n	5 kg bag	210 g/m²	180 g/m²
B82302001	100005814	s-107 n blanco	300 ml cartridge	12.4 m/cartridge	12.4 m/cartridge
B82302002	100005815	s-107 n transparente	300 ml cartridge	12.4 m/cartridge	12.4 m/cartridge
B82302003	100005816	s-107 n gris	300 ml cartridge	12.4 m/cartridge	12.4 m/cartridge

* **Conditions:**

Laboratory obtained data. They may vary depending on the state of the base and the placement conditions.

Self-leveling layer thickness 5 - 6 mm.

Adhesive layer thickness 4.5 – 5.5 mm.

Tiling joint width 3 mm.

butech®

Further information:
Carretera Vila-real - Puebla de Arenoso (CV-20) km 2,5
12540 Vila-real, Castellón, Spain

Telephone (+34) 964 53 62 00

http://www.butech.es
butech@butech.es